

**ABSTRACT**

An illumination optical system for illuminating an illuminated surface using light from a light source  
5 includes a first diffraction optical element upon which the light from the light source is incident, and a second diffraction optical element upon which the light from the light source is incident, wherein the light from the first diffraction optical element forms a  
10 first part of an illumination distribution on a predetermined surface that substantially has a Fourier transform relationship with the illuminated surface, and the light from the second diffraction optical element forms a second part of the illumination  
15 distribution.

Representative Figure: FIG. 1